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ABSTRACT

Two studies were conducted to investigate the predictive validity of prekindergarten and pre-grade 1 screening checklists. In the first study, all 83 students registering for kindergarten at an elementary school were administered Austin and Lafferty's prekindergarten checklist. Toward the end of the school year, the children were administered the Metropolitan Readiness Test (MRT). Relationships were sought between checklist scores and the prereading composite stanine on the MRT. In a subsequent study, the 19 questions on Ames' (1970) checklist were administered to each student. Thirteen months later, reading levels completed by each student were compiled. For each of the reading levels completed (preprimer, primer, or "on level"), the percentage of students who scored within a specific range of "yes-answer" scores on the checklist was calculated. A Pearson product-moment correlation was calculated to relate the number of such answers with the reading level subsequently completed. Results are discussed, and recommendations are offered for using the checklists and for relating the findings to program content. (RH)

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TWO STUDIES IN THE USE OF CHECKLISTS TO PREDICT SUCCESS IN KINDERGARTEN AND GRADE ONE

Early Intervention Requirements as Determined by a Pre-Kindergarten Screening Checklist

Predictive Validity of a Kindergarten Checklist: Who Will Fail Reading in First Grade?

Judith VanDyke Scourfield

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EARLY INTERVENTION REQUIREMENTS AS DETERMINED BY A PRE-KINDERGARTEN SCREENING CHECKLIST

Judith V. Scourfield

Can a pre-kindergarten screening checklist detect students who will require earlier intervention in order to succeed in school? Austin and Lafferty claim that to be ready to enter kindergarten one must be able to answer yes to most of the following questions:

"1. Will...[he] be five years and six months or older when he begins kindergarten?
2. Can he tell you the names of three or four colors that you point out?
3. Can he draw or copy a square?
4. Can he name drawings of a cross, square, circle?
5. Can he repeat a series of four numbers without practice?
6. Can he tell his left hand from his right?
7. Can he draw and color beyond a simple scribble?
8. Can he tell what things are made of, as cars, chairs, shoes?
9. Can he travel alone in the neighborhood (two blocks) to store, school, playground, or the homes of friends?"[1]

These questions can be administered relatively quickly, but how effective are they in screening those who will not be successful in kindergarten?

The Metropolitan Readiness Test[2] was administered in March of the kindergarten year to determine whether a child had mastered kindergarten skills and whether or not a child was ready for first grade.

The purpose of this study was to determine if there is a relationship between the number of yes answers on Austin and Lafferty's nine pre-kindergarten questions administered in June prior to entering kindergarten and the pre-reading skills composite stanine on the Metropolitan Readiness Test administered the following March in kindergarten. From these results a specific cut-off for an individual school might be determined by which predictions might be made.

Population. The population consisted of all 83 students who registered for kindergarten in June and continued in the same suburban elementary school in kindergarten until March of the following year.

Procedure. All children registered for kindergarten at this elementary school in June of the previous school year. At that time the researcher determined whether each individual student could or could not perform eight of

the tasks described by Austin and Lafferty. The ninth question, travelling alone in the neighborhood, was determined by asking the parent who accompanied the child to the registration. The Metropolitan Readiness Test was routinely administered in March as a matter of school district policy. A Pearson Product-moment correlation was calculated.

Findings. Of the students who were administered both tests, a Pearson Product-moment correlation of .76 was found relating the number of yes answers on Austin and Lafferty's nine questions, scored as a dichotomy, with the prereading composite stanine on the Metropolitan Readiness Test.

Results should also be viewed visually as well as statistically. There was an equal number of stanines and questions. Nineteen percent of students received the same score on each (the same stanine on the Metropolitan as the number of yes answers on the screening checklist). Thirty-nine percent scored one stanine higher or lower than the number of yes answers, and 23 percent scored two stanines higher or lower than the number of yes answers. Therefore, a total of 81 percent of students fell within the range of two one way or the other.

All of the five pupils in the lowest four stanines on the Metropolitan had scored three or fewer yes answers

TABLE OF STUDENT PERFORMANCE ON BOTH TESTS

Number of Yes Answers to Questions

Metropolitan Readiness Test Composite Stanine

	1	2	3	4	5	6	7	8	9
1									
2									
3		2							
4	1		2						
5			3	3	3	1	1		
6				5	9	6	4		
7		1	1	1	2	1	3	1	2
8				1	4	2	8	3	1
9			1	1	4	1	4		1

Total
83

on Austin and Lafferty's nine questions. However, it should be noted that six students who had three or fewer yes answers subsequently went on to score stanines five, seven, or nine on the Metropolitan. That is, of the 11 students who received three or fewer yes answers, approximately half fell into the lowest four stanines while the other half later went on to do well on the Metropolitan.

Only 28 percent of the population of this study was five years and six months old at the beginning of kindergarten (question one), but 91 percent of those students scored at the sixth stanine or above on the Metropolitan. The remaining students who were younger than five years and six months upon entering kindergarten had 77 percent of the group score at the sixth stanine or above on the Metropolitan.

Since an item analysis of test results revealed that only three of the 83 students could not perform item seven, drawing beyond a simple scribble, those choosing to replicate the study may choose to omit that question.

Recommendations. From these data it is recommended that:

1. Since a student who has three or fewer yes answers on Austin and Lafferty's questions prior to entering kindergarten has approximately a 50 percent chance of performing in the lowest four

stanines of the prereading skills composite of the Metropolitan Readiness Test, then those students should, upon entering kindergarten, be considered for additional early intervention activities.

2. There should be follow-up on all kindergarten students, both those above and those below the level of three yes answers.
3. Continue the study of these and other tests.
4. Study further to determine whether age may be a factor.

Since each individual is a sample of one from a population of one, statistical data must always be viewed with caution. These recommendations would appear to be appropriate for the elementary school under study. They are not intended to apply to any other school.

Many articlesrecently attest to the need for the replication of experiments mostly in reference to fraud.[3] Another purpose for replication is to determine local needs. It is suggested that decisions regarding student placement, instructional strategies, and content selection and revision generally be made at the local level. Test data acquired at the individual school level is most appropriate for determining individual building programming needs. Staff of other schools may choose to replicate this study to determine a cut-off

for predictive purposes for a specific population, using eight of Austin and Lafferty's nine questions with a selected standardized readiness test or other criterion.

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[1]John J. Austin and J. Clayton Lafferty, Ready or Not? The School Readiness Checklist (Muskegon, Michigan: Research Concepts, 1963) cited by Louise Bates Ames, Clyde Gillespie, and John W. Streff, Stop School Failure (New York: Harper and Row, 1972),p.111.

[2]Joanne R. Nurss and Mary E. McGauvran, Metropolitan Readiness Tests (New York: Harcourt, Brace, Jovanovich, Inc., 1974).

[3]William J. Broad and Nicholas Wade, "Science's Faulty Fraud Detectors", Psychology Today, Volume 16, Number 11, November, 1982, pp.51-57.

Kathleen Fisher, "The Spreading Stain of Fraud", APA Monitor, American Psychological Association, Volume 13, Number 11, November, 1982, pp. 1, 7-8.

PS

PREDICTIVE VALIDITY OF A KINDERGARTEN CHECKLIST: WHO WILL FAIL READING IN FIRST GRADE?

Judith V. Scourfield

Can it be determined at the end of kindergarten which students will not complete at least the primer reading level by the end of first grade? It will probably be those students who were not ready for school and may be required to repeat first grade. Ames (1970) claims that "it is vital to determine that every child entering first grade be ready to do so." She proceeds to list 19 "things for a parent to check on in making this determination." It was not specified exactly how many of these a child would have to be able to perform in order to be ready for first grade. If not all 19, how many?

The purpose of this measure is to provide a prediction at the end of kindergarten of whether or not a child is likely to complete at least the primer reading level by the end of first grade. This descriptive study was conducted to determine a specific cut-off for which a prediction might be made and how grest a relationship between the number of yes answers to the 19 questions and the reading level subsequently completed by the end of first grade exists.

Population

The population consisted of all 48 kindergarten students in one elementary school of a suburban Pennsylvania school district who remained in the school until the following June of first grade.

Procedure

In May of the kindergarten year the 19 questions were administered by the researcher to each student individually, with three of the questions (numbers 1, 3, and 4) being answered by the kindergarten teacher. The following June reading levels completed by each student were compiled. All students received reading instruction in the same basal series, The New Macmillan Reading Program: Series$_r$. The first grade teachers were not made aware of their students' scores on the kindergarten questions. For each of the reading levels completed, preprimer, primer, or 1^2, the percentage of students who scored within a specific range of yes answer scores was calculated. A Pearson product-moment correlation was calculated relating the number of yes answers with the reading level subsequently completed.

Findings

Ninety percent of the children who completed a 1^2 (the level that is expected to be completed by the end of first grade to be considered "on level") scored 13 to 19 yesses on the questions. Seventy percent of the children who completed the primer level scored 10 to 15 yesses. Of those students who were to be retained in first grade

and did not complete the pre-primer level, 83 percent had nine or fewer yes answers. Since there is an overlapping of scores on the primer and 1^2 levels on the scores of 13 to 15, it is difficult to predict how well a student will perform in first grade at the average level. Rather, it will show who might fail.

On an item analysis it was found that only one student failed questions 7, 8, and 16. Forty-six of the 48 failed question 19. The mean number of yes answers for all kindergarten students was 12.5.

A Pearson product-moment correlation coefficient was calculated to be r=.85. A strong relationship appears to exist. However, it is not with great precision that individual predictions can be made from group data. Therefore, recommendations in this study were gleaned from the raw data as opposed to the correlation coefficient, even though the latter is high.

Recommendations

From these data it is recommended that if a student has nine or fewer yes answers he should be considered for kindergarten retention, early intervention, or both. Continued study of these 19 questions is essential, particularly in reference to reliability among teachers. Elimination of questions 7, 8, 16, and 19 for replication might be considered.

This recommendation would appear to be appropriate for the suburban Pennsylvania school district elementary school

under study. It is not intended to apply to any other school. This study might be replicated in other school buildings or districts to determine a cut-off for predictive purposes for that specific local school or district.

REFERENCES

Ames, Louise Bates. Is Your Child In The Wrong Grade? New York: Harper and Row, 1970, cited by Louise Bates Ames, Clyde Gillespie, and John W. Streff. Stop School Failure New York: Harper and Row, 1972.

The New Macmillan Reading Program: Seriesr Carl B. Smith and Ronald Wardhaugh. Riverside, N.J.:Macmillan Publishing Company, 1975.

AMES' 19 QUESTIONS

1. Does the child's kindergarten teacher recommend that he go on to first grade?
2. Will he be a full six years old or older before the September date when first grade starts?
3. Does he seem to you as mature as other children his same age...?
4. Has the ordinary 'good' behavior of the typical five-year-old broken ip a bit and...show some signs of being or becoming a rebellious, argumentative six?
5. Can he copy a circle, counterclockwise and starting at the top?
6. Can he copy a triangle?
7. Can he copy a divided rectangle, angled lines crossing center line?
8. Does he hold a pencil in a good two- or three-finger grasp?
9. Can he print at least his first name?
10. Does he know his upper- and lowercase letters, out of context?
11. Can he count to 30?
12. Can he write numbers up to 20?
13. Does he know right from left?
14. Does he know his age and the month of his birthday?
15. Can he stand on one foot while you count to eight?

16. Can he tie his shoelaces?
17. Can he throw a ball overhand?
18. Can he repeat four numbers after hearing them once?
19. Can he calculate within 20?